

1 ABSTRACT OF THE DISCLOSURE

2 A prosthesis for the surgical replacement of a  
D 3 dysfunctional knee joint ~~is disclosed~~. The prosthesis  
4 includes a tibial platform, one or two tibial bearing  
5 inserts, and a femoral component.

6 PA In a unicompartmental embodiment of the invention,  
7 the tibial platform includes a spike for securing the  
8 tibial platform to the tibia. The tibial platform, in  
9 the unicompartmental embodiment, includes a track, which  
10 may be curved, and which is slidably engaged in dovetail  
D 11 fashion by a tibial bearing insert, ~~typically of high-~~  
D 12 ~~molecular weight polyethylene~~. The superior surface of  
13 the tibial bearing insert is concave spherical, designed  
14 to slidably engage the inferior surface of the femoral  
15 component. The inferior surface of the femoral component  
16 is generally convex spherical, with radius of curvature  
17 slightly smaller than the radius of curvature of the  
18 tibial bearing insert. ~~In some embodiments the inferior~~  
19 ~~surface of the femoral component may have two or more~~  
20 ~~differing radii of curvature at different points on such~~  
21 ~~surface. Typically the tibial platform and the femoral~~  
22 ~~component are constructed of cobalt-chromium alloy.~~

23 PA In a bicompartmental or tricompartmental embodiment  
24 of the invention, the tibial platform includes two tracks,  
25 each of which may be curved, and each of which slidably  
26 engages in dovetail fashion a tibial bearing insert. The  
27 two tibial bearing inserts each engage, via their superior  
28 concave spherical surfaces, mating inferior convex sur-  
29 faces of the femoral component. The two curved tracks  
30 are in general not concentric; rather, the center of each  
31 falls on a line normal to the plane of such curved track  
32 and passing through the center of curvature of the  
33 concave spherical surface of the tibial bearing insert  
34 of the other curved track.

35  
36